REMARKS

Amendments to the Claims

Claims 1-28 are pending in the present application, with Claims 1, 20, and 26 being independent. Applicants have amended Claims 1, 3-23, and 25-28 herein. No new matter has been added.

Claim Rejections Under 35 U.S.C. § 112, first paragraph

In the Final Office Action dated September 22, 2005, the Examiner rejected Claims 1-25 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Applicants respectfully traverse that rejection.

In response to the Office Action dated March 24, 2005, Applicants submitted portions of the specification that included representative working examples of how to determine the assignments and calculate assignments and routes according to the variables claimed. In the Final Office Action dated September 22, 2005, the Examiner has stated that, "The application, in the specification as well as the claims, uses a specific formula to calculate the efficient solution. The specific formula uses multiple variables, therefore one of ordinary skill in the art would not be able to look at the specification and determine/calculate the efficient solution without undue experimentation."

Because of the Examiner's continued rejection under 35 U.S.C. § 112, "the burden falls on the applicant to present persuasive arguments, supported by suitable proofs where necessary, that one skilled in the art would have been able to make and use the claimed invention using the disclosure as a guide." See MPEP § 716.09. Therefore, Applicants respectfully submit the enclosed Declaration of Irina Ioachim, co-inventor of the present application, disclosing that one of ordinary skill in the art would be able to read the specification as presented and determine how to achieve the invention defined by the pending claims, including how to calculate the potential assignments and determine an efficient assignment and route, without undue experimentation.

Furthermore, Applicants respectfully submit that the enclosed declaration is timely filed to be entered and entitled to consideration. Specifically, this declaration submitted under 37 CFR 1.132, is timely filed because it submitted after the prosecution is closed (e.g., after a final rejection) and filed with a request for continued examination (RCE) under 37 CFR 1.114 in an application filed after June 8, 1995. See MPEP § 716.01.

Accordingly, Applicants submit that the rejection under 35 U.S.C. § 112, first paragraph, should be withdrawn.

Claim Rejections Under 35 U.S.C. § 112, second paragraph

In the Office Action, the Examiner rejected Claims 1-25 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended independent Claims 1 and 20 to provide proper antecedent basis. Furthermore, Applicants have amended Claim 15 to correct the alleged indefiniteness. Accordingly, Applicants submit that the rejection under 35 U.S.C. § 112, second paragraph, of Claims 1-25 should be withdrawn.

Claim Rejections Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected Claims 26-28 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. US 6,278,965 to Glass et al. (hereinafter Glass). Applicants respectfully traverse that rejection.

Independent Claim 26

The rejection of Claim 26 is respectfully traversed. Applicants submit that the document cited by the Examiner fails to describe, teach, or suggest: (1) a central computer system comprising a plurality of databases operable for managing traveler processes and transmitting passenger data, baggage data, and flight data; (2) a server computer connected to the central computer system comprising an electronic dispatch software module configured to calculate a plurality of potential baggage assignments and routes based on the passenger data, baggage data, and flight data; (3) at least one tug client operable for receiving baggage assignments and routes

from the server computer via a wireless network, presenting baggage assignments and routes to a baggage handler, and transmitting messages to the server computer via the wireless network; and (4) at least one dispatch client operable for receiving assignments and routes from the server computer via the wireless network and distributing them to the tug clients via the server computer via the wireless network, as presently recited in amended independent Claim 26.

The Glass Reference

The Examiner relies on the Glass reference to teach "a system with a central computer system 106, a server computer 104 running a software module (see Figure 1), one client computer 102 coupled to a server, and a second client computer coupled to a server 110."

The Input Management Subsystem 106 of Glass is not the same as the Central Computer System of Claim 26

The Glass reference fails to teach a central computer system comprising a plurality of databases operable for managing traveler processes and transmitting passenger data, baggage data, and flight data, as recited in amended independent Claim 26. Instead, Glass discloses that the input management subsystem 106 is a general-purpose means of acquiring data from various sources 115 by utilizing "a collection of software programs dealing with various *external* input data sources 115." See Col. 13, lines 48-50. Furthermore, Glass states that "the [input management subsystem] 106 has no direct connection to the database 105." See Col. 24, lines 18-19.

However, the central computer system of Claim 26 actually comprises a plurality of databases, including the reservation system (RES) 110 database and the operations support system (OSS) 115 database, that *reside* on the central computer system 105. See page 6, lines 1-3 of the Application. Therefore the plurality of databases that reside on the central computer system are *internal* input data sources. This is opposite from the input management subsystem 106 of Glass that receives data over network or serial links, such as FTP file transfer, from *external* data sources, and then passes that data on to the information subsystem 104. See Col. 13, lines 50-56.

The Information Subsystem 104 of Glass is not the same as the Server Computer Comprising an Electronic Dispatch Software Module of Claim 26

The Glass reference fails to teach a server computer connected to the central computer system comprising an electronic dispatch software module configured to calculate a plurality of potential baggage assignments and routes based on the passenger data, baggage data, and flight data, as recited in amended independent Claim 26.

The Glass reference discloses an information subsystem 104 that "receives data from the various subsystems 102, 106, 108 and 110 of the traffic adviser 100, processes the data and stores it in the database 105, and then feeds back or makes available the data stored in the database 105 to the executive subsystem 102, the prediction subsystem 108, and the client interface subsystem 110 using embedded SQL statements." See Col. 19, lines 21-27. More specifically, in reference to Figure 4, Glass discloses four classes that are included in the information subsystem 104 that are operable for the following: connecting to the traffic adviser database and for inserting error messages into an error message table (405); creating, updating, and querying information about an arriving flight (404); and creating, updating, and querying information about a departing flight in the database (403). See Col. 19, lines 32-65 and Figure 4. The Glass reference fails to disclose any features that are associated with element (406). Furthermore, Glass discloses that the information subsystem 104 is operable to "1) communicate traffic raw data inputs from automatic data streams and manual inputs to the prediction subsystem; 2) provide inter-process management and control; 3) support information processing; and 4) provide system housekeeping." See Col. 13, lines 38-46.

Therefore, none of the above features disclosed by the information subsystem 104 of Glass, and noted above, teach an electronic software dispatch module that is configured to calculate a plurality of potential baggage assignments and routes based on the passenger data, baggage data, and flight data as recited by Claim 26. In particular, Glass doesn't disclose the processing of baggage data anywhere in the application. Furthermore, none of the above features of the information subsystem 104 of Glass teach a step of performing calculations. Instead,

Glass describes the information subsystem 104 as a "central coordination subsystem." See Col. 11, lines 45-46.

The Client Computers 102 or 110 of Glass are not the same as the Tug Client of Claim 26

The Glass reference fails to teach at least one tug client operable for receiving baggage assignments and routes from the server computer via a wireless network, presenting baggage assignments and routes to a baggage handler, and transmitting messages to the server computer via the wireless network, as recited in Claim 26.

Glass discloses that "the primary responsibilities of the executive subsystem 102 are to control the various traffic adviser subsystems 102, 104, 106, 108, 110; to start and shut down the traffic adviser processes at scheduled times; to monitor system components for error and warning conditions; to notify the traffic adviser system support personnel of detected system errors; and, when possible, to recover from system failures. Additional duties of the executive subsystem 102 include facilitating subsystem debugging, providing remote access to the traffic adviser monitoring and control, maintaining system statistics, and managing user accounts." See Col. 14, lines 53-64.

Furthermore, Glass discloses that "the Client Interface Subsystem (CIS) 110 delivers flight status data to clients 117 in the form of display screens and a data stream. Clients 117 may choose in which form to receive data from the traffic adviser 100. Clients 117 wishing to receive display screens provide a node connection to the traffic adviser 100 on a local area network or a dial-in modem. Clients 117 wishing to receive a data stream can receive the data in the form of network TCP/IP messages or over a dial-up serial line. The CIS 110 also receives input data from clients 117 in the form of display requests and flight status updates. The display requests select the information to be displayed on a particular client screen and apply only to that screen. The flight status updates allow controllers to enter information into the traffic adviser 100 concerning individual flights (pushback, gate arrival) and the current airport configuration (departure split, landing direction, etc.)" See Col. 29, lines 8-24.

Therefore, neither the executive subsystem 102 nor the Client Interface Subsystem (CIS) 110 of Glass teaches teach at least one tug client operable for receiving baggage assignments and

routes from the server computer via a wireless network, presenting baggage assignments and routes to a baggage handler, and transmitting messages to the server computer via the wireless network. Furthermore, neither client of Glass is operable to perform any functions related to baggage routing or presenting the baggage assignments and routes to a baggage handler.

Summary for Analysis of Independent Claim 26 Rejection

In light of the differences between amended independent Claim 26 and the Glass reference, Applicants submit that Glass fails to teach or suggest at least the features discussed above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 26.

Claim Rejections Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected Claims 1-16 and 20-24 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Applicant Admitted Prior Art (AAPA) in view of U.S. Patent No. 6,580,046 to Koini et al. (hereinafter Koini). Further, the Examiner rejected Claims 17-19 and 25 under 35 U.S.C. § 103(a) as allegedly being unpatentable over AAPA and Koini, in further view of U.S. Patent No. 6,748,320 to Jones (hereinafter Jones). Applicants respectfully traverse those rejections.

Independent Claim 1

The rejection of Claim 1 is respectfully traversed. Applicants submit that none of the documents cited by the Examiner describe, teach, or suggest: (1) operating a software module at a server computer to calculate a plurality of costs of potential assignments for baggage transfer from the data and to select a most efficient assignment from the plurality of costs of potential assignments; (2) operating the software module at the server computer to calculate a plurality of potential routes for completing the assignments from the data and to select a most efficient route from the plurality of potential routes; and (3) electronically distributing over a wireless network the most efficient assignment and most efficient route from the server to a plurality of clients in

communication with the distributed computer network, as presently recited in amended independent Claim 1.

The Combination of AAPA and Koini as Applied to Independent Claim 1

The AAPA reference

The AAPA the Applicants submitted in the Background section of the patent application describes the conventional approach to transferring baggage from inbound flights to connecting flights. As stated at page 1, line 18 to page 2, line 2 of the application, the conventional approach utilizes a dispatcher who is responsible for organizing and managing a pool of tug drivers. More specifically, the dispatcher receives information about the inbound flight's gate assignment, the connecting baggage on the flight, and the gates to which the connecting baggage must be delivered. The gates are then grouped into zones based on their proximity to each other. The dispatcher must rely on her experience to create, as quickly and most efficiently as possible, assignments and routes for the tug drivers by taking into consideration the information concerning the inbound flight gate, connecting baggage data, and the connecting flight gates. The dispatcher makes the determination by calculating what she believes to be the most efficient assignment and route by performing calculations manually. Furthermore, after the dispatcher has made the determination of what she believes to be the most efficient route, the written assignments and routes must be manually passed onto the tug drivers.

The AAPA does not teach the calculation of a plurality of costs of potential assignments and plurality of routes for baggage transfer and to select a most efficient assignment and a most efficient route by a software module

Applicants submit that the AAPA does not teach operating a software module at a server computer to calculate a plurality of costs of potential assignments and plurality of routes for baggage transfer and to select a most efficient assignment and a most efficient route from the plurality of potential costs of assignments and plurality of routes, as presently recited in amended independent Claim 1.

The AAPA teaches a system where a dispatcher must consider the inbound flight gate, the connecting baggage data, and the connecting flight gates, and based on her own experience,

determine and calculate what she believes to be the most efficient assignments and routes for the tug drivers as quickly as possible. First, the empirical determination made by the dispatcher does not utilize all the variables that the software module of Claim 1 utilizes to calculate a plurality of costs of potential assignments for baggage transfer. The software module of Claim 1 utilizes additional variables such as the maximum and minimum number of bags, number of stops, and the number of same side zones not kept together in an assignment solution, along with target values for the number of bags and stops in an assignment solution, to calculate a plurality of costs for a plurality of potential assignment solutions.

Furthermore, in the AAPA, the calculations and determination of the most efficient assignment and most efficient route, must be done as quickly as possible as many inbound planes at an airport require the transfer of baggage to many different connecting flights. Therefore, the dispatcher may only be able to manually calculate a few potential assignments, and based on her expertise quickly select which of these few assignments would be the most efficient. After selecting what she believes to be the most efficient assignment, the dispatcher must then conduct a further calculation to determine what she believes to be the most efficient route. Once again, because of the manual calculations and time constraints, the dispatcher can only calculate a few potential routes and choose a most efficient route. Therefore, the assignments and routes selected in the AAPA are most likely not the most efficient solutions.

For the method for calculating the plurality of costs of potential assignments as recited in independent Claim 1, the software module utilizes many variables as mentioned above in an exemplary equation to calculate a cost value for each of a plurality of potential assignments Thereafter, the software module can determine which of the plurality of costs for each potential assignments has the lowest cost value and use that particular assignment as the most efficient assignment solution. Furthermore, based on the most efficient assignment, the software module can then calculate the most efficient route by determining a plurality of potential routes and then calculating the total distances between all the stops in each of the plurality of potential routes. The software module then selects the route with the shortest total distance and designates it as the most efficient route.

The AAPA does not teach electronically distributing over a wireless network the most efficient assignment and most efficient route

Applicants submit that the AAPA does not teach electronically distributing over a wireless network the most efficient assignment and most efficient route from the server to a plurality of clients in communication with the distributed computer network, as presently recited in amended independent Claim 1.

Instead, the AAPA teaches a system where the written assignments and routes are manually distributed to the tug drivers for them to carry out their duties. This system does not allow the tug drivers to receive updated assignments and routes in case flight or baggage information changes. Furthermore, in the AAPA, a tug driver would have to return to the dispatcher in order to receive their next assignment. Therefore, a system where the most efficient assignment and most efficient route are electronically distributed over a wireless network from the server to a plurality of clients in communication with the distributed computer network, as presently recited in amended independent Claim 1, overcomes a major drawback of the AAPA.

The Koini Reference

In the Office Action, the Examiner stated that the AAPA does not disclose the use of a software module operating on a server. For that feature, the Examiner relied on the Koini reference. Koini relates to a process that provides for the automated conveying, sorting and loading of baggage items in airports having a baggage-conveying facility conveying baggage from a check-in region to a baggage area, from where they are transported for loading into aircraft.

The Koini Reference does not teach the calculation of the most efficient assignment and route by a software module

Applicants submit that Koini does not teach operating a software module at a server computer to calculate a plurality of costs of potential assignments and a plurality of routes for baggage transfer and to select a most efficient assignment and a most efficient route from the

plurality of potential costs of assignments and plurality of routes, as presently recited in amended independent Claim 1.

Instead, Koini discloses a system that records baggage properties such as weight, volume, contour, and consistency in order to determine which type of loading system to use in order to load baggage onto an airplane in an automated conveying environment. The Examiner relies on Koini to teach calculating an optimal assignment and route. However, the section of Koini the Examiner relies upon discloses, "dividing the baggage items into predetermined classes and determining an optimum assignment to loading devices in accordance with classification and flight destination, as well as a corresponding loading scheme for the individual loading device." See Col. 2, lines 40-44. Therefore, the calculation of an optimal assignment and route in Koini is merely related to determining what type of loading device (i.e. purely manual; robots with exchangeable grippers; or other mechanical loading apparatuses) to use for loading the baggage items.

Furthermore, Koini does not teach a system that optimizes the routing of baggage between gates of connecting flights after arriving at an inbound flight gate. The system of Koini is located inside an airport terminal and conveys the baggage from a check-in region to a baggage area for loading into an aircraft. Therefore, the system of Koini is a sorting solution as opposed to the routing solution of Claim 1.

The Koini reference does not teach electronically distributing over a wireless network the most efficient assignment and most efficient route

Applicants submit that Koini does not teach electronically distributing over a wireless network the most efficient assignment and most efficient route from the server to a plurality of clients in communication with the distributed computer network, as recited in amended independent Claim 1.

Instead, the Koini reference teaches a computer system that is physically connected to a measuring device for recording baggage properties. The computer system determines an assignment of the baggage items in accordance with classification and flight destination and transmits the assignment to a loading device that is physically connected to the computer.

Specifically, the Koini references fails to make *any* reference to electronically distributing over *a wireless network* the most efficient assignment and most efficient route from the server to a plurality of clients in communication with the distributed computer network.

Modifying the teachings of the AAPA with Koini fails to achieve the Invention of Independent Claim 1

Applicants submit that combining the references of AAPA with Koini fails to achieve the invention as recited in independent Claim 1.

The AAPA teaches a system where a dispatcher receives information concerning the inbound flight gate, the connecting baggage data, and the connecting flight gates, and based on her own experience, determines and calculates what she believes to be the most efficient assignments and routes for the tug drivers as quickly as possible. After the dispatcher has made the determination of what she believes to be the most efficient route, the written assignments and routes must be manually passed onto the tug drivers.

The Examiner states that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teaching of AAPA by using the baggage handling software module of Koini to automate and optimize the calculations of assignments and routes, in order to provide an automated and efficient process for baggage transfer." However, combining the references of the AAPA and Koini would require that a manual dispatcher be present in operating the software module.

However, the invention of Claim 1 does not require the presence of a manual dispatcher. Instead, the invention of Claim 1 comprises a software module at the server computer that calculates a plurality of costs of potential assignments to select a most efficient assignment from the plurality of costs of potential assignments and then calculates a plurality of potential routes for completing the most efficient assignment and selects a most efficient route from the plurality of potential routes. Thereafter, the invention of Claim electronically distributes over a wireless network the most efficient assignment and most efficient route from the server to a plurality of clients in communication with the distributed computer network. Therefore, the manual

dispatcher of the AAPA is not present in the invention of Claim 1; therefore, combing the AAPA and the Koini references does not achieve the invention.

Summary of the Analysis for Independent Claim 1

In light of the differences between amended independent Claim 1 and the AAPA and Koini reference, Applicants submit that the AAPA and Koini reference, either alone or in combination, fails to teach at least the features discussed above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 1.

Independent Claim 20

Applicants submit that the AAPA and Koini reference, either alone or in combination, fails to teach: (1) formulating a plurality of costs of potential assignments for transferring the items from the item data in order to select a most efficient assignment and (2) formulating a plurality of potential routes for completing the most efficient assignment from the item data in order to select a most efficient route, as presently recited in independent Claim 20.

Applicants submit that these features are similar to the features of Claim 1 as discussed above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 20.

Summary

Based on the above, Applicants submit that independent Claims 1, 20, and 26 are patentable over the documents cited by the Examiner. Additionally, the remaining claims depend from one of the independent claims either directly or indirectly and are submitted to be patentable for similar reasons. The dependent claims also recite additional features further defining the present invention over the cited document, and Applicants submit that the cited documents do not teach or suggest integrating those features into the presently claimed invention. Accordingly, Applicants request separate and individual consideration of each dependent claim.

CONCLUSION

Applicants submit the foregoing as a full and complete response to the Official Action dated September 22, 2005. Applicants submit that this Amendment and Response places the application in condition for allowance and respectfully requests such action. If any issues exist that can be resolved with an Examiner's Amendment or a telephone conference, please contact Applicants' undersigned attorney at 404.572.4647.

Respectfully submitted,

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